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Authors	Jennings, Emma L. M.;Gallagher, Paul F.;O'Mahony, Denis
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Table 1. Comparison of ADR Risk Prediction Models by Included Population Studied, Risk Predictive Variables and Area Under the Receiver Operator Curve

			Studies as reported by Stevenson et al. [6] Systematic Review		
	O'Mahony et al.[4] 2018 ADRROP	Tangiisuran et al. [7] 2014 BARDI Model	McElnay et al. [3] 1997	Onder et. al [13] 2010 GerontoNet	Trivalle et al. [8] 2011
Study Demographics	n = 2217, 467 ADRs (21%) Validation n = 530 Acute hospital (medical and surgical)	n = 690, 86 ADRs (12.5%) Validation n = 483 Acute hospital (elderly care and stroke wards)	n = 929; 149 ADEs (16%) Validation n = 204 Acute hospital (medical and surgical)	n = 5936, 383 ADRs (6.5%) Validation n = 483 Acute and community hospitals	n = 576, 152 ADRs (39%) Validation n = NR 16 geriatric rehabilitation centres
Age (in years)	>80% >70 years	100% ≥ 85 (81-89)*	100% ≥ 65; range 65-98	>90% ≥ 80; 78.0 ± 7.2**	100% ≥ 65, 83.6 ± 7.9**
Polypharmacy	>40% 6-10 medications	5 (3-7)*	4 (1-15) medications	>65% >5 medications	9 (6-12) medications*
Multi-morbidity	>75% 4+ co-morbidities	8 (6-10)*	-	>50% 4+ co-morbidities	-
Risk Predictive Variables	Female versus male Age > 70 eGFR < 30 ml/min BSA Needs assistance ≥ 1 ADL 4+ co-morbidities Liver Failure STOPP Category: 1 versus 0 STOPP PIMs ≥ 2 versus 0 STOPP PIMs ≥ 1 Fall in last year	≥ 8 drugs Hyperlipidaemia Raised WCC Use of anti-diabetic agents LOS ≥ 12 days	Prescribed antidepressants Prescribed digoxin Gastrointestinal problems Abnormal potassium level Patient belief drugs were responsible Experiences angina Experiences COAD	≥ 4 Comorbid conditions Heart Failure Liver Disease No. of Drugs – ≤ 5 – 5-7 – ≥8 Previous ADR Renal Failure	Number of medications – 0–6 – 7–9 – 10–12 – ≥13 Antipsychotic treatment Recent anticoagulant
Area Under Receiver Operator Curve (AUROC) Statistic	Development 0.63 [95% CI 0.60-0.67] Validation 0.59 [95% CI 0.53-0.65]	Internal Validation 0.74 [95% CI 0.68-0.79] External Validation 0.73 [95% CI 0.66-0.80]	No AUROC reported – Accuracy 63% – Sensitivity 40.5% – Specificity 69%	Development 0.71 [95% CI 0.68-0.73] Validation 0.70 [95% CI 0.63-0.78] External Validation O'Connor et. al [5] 0.62 [95% CI 0.57-0.68]	Overall 0.70 [95% CI 0.65-0.74]
*median (IQR); **mean ± standard deviation ADR – Adverse Drug Reaction (reported as number of patients); ADE – Adverse Drug Event; NR – Not recorded; WCC – White blood cell count; LOS – Length of stay; COAD Chronic Obstructive Airways Disease					